August-September 1984

TWIN CITIES ATARI INTEREST GROUP

EDITORIAL COMMENTS

During the past several months we haven't received much in the way of article Submissions. I'm not sure exactly what happened but it has, so here is what I plan to do about it:

1) The newsletter will now be 6 issues a year instead of 12. A meeting notice will be sent on the odd numbered months, a full newsletter on the even-numbered months

2) Articles will be due by the 8th of the even numbered months. If an article is **not** in by that time it will be held until the next newsletter. This will give the secretary a full month to summarize one meeting and over a week for the second.

By doing this, I hope to be able to produce a better newsletter. The quantity will be reduced but hopefully the quality will increase as more information is contained in each newsletter.

Elsewhere in this newsletter you'll find the TAIG survey results. Criticisms of the newsletter included "not large enough" and "arrives too late". This new system should take care of both of these problems.

The quality of the newsletter is going to depend on members contributing to it. Articles don't always have to be long or technical -- you don't have to be an expert to express an opinion (about software, for instance). Here are some of the needs we have, as suggested by the questionnaire. Can you contribute by writing an article (or series of articles!) on:

- ATARI graphics
- educational software
- software reviews
- advanced Assembly language
- advice for beginners
- what goes on in the interest groups
- services TAIG offers (and how to use them)
- ideas/opinions about what TAIG should or could be doing
- reactions to articles already published

We can also use ATARI or computer related drawings, cartoons and puzzles.

TAIG QUESTIONNAIRE RESULTS
By Dale Panton

The response to our questionnaire a few months ago was quite encouraging, both qualitatively and quantitatively. Many people spent a good deal of time answering the non-yes/no questions. This time spent is much appreciated, as I believe some new directions for TAIG can result from these constructive responses.

There were 62 total respondees to the questionnaire, but not all of these answered every question. Therefore, it is difficult to report the results in terms of percentages. So instead, I will report the raw totals for each question. The short-answer questions will be reported first, then at the end I will attempt to paraphrase and categorize the more verbose responses.

1. How effective is the Q/A session during the meeting?
   Effective 16 Fairly effective 4
   Not very effective 7

2. Do you like the meeting
   Demos 54 Games 38 Utilities 46
   Products 50

3. Would you like to change the meeting date/time?
   Yes 10 No 32
   Those that indicated a change were fairly evenly distributed over the days of the week and the evening times.

4. Are you satisfied with the content of the meeting?
   Satisfied 44 Dissatisfied 6

5. Do you like having the vendors at each meeting?
   Yes 57 No 1

6. How are their prices?
   Too high 8 OK 42 Too low 0

7. How often do you purchase from them?

	Frequently	Sometimes	Never
Software	10	45	4
Hardware	0	30	23
Books	2	25	25

8. How often should we have swap meets?
   Every: 1 mo.-12 2 mo.-5 3 mo.-21
   4 mo.-5 6 mo.-6 1 yr.-1

9. Do you come to them to:
   Swap 21 Buy 28 Sell 14
   No opinion 11

10. Would you come to a game fair to:
    Participate 19 Just look 26
    Not interested 16 What it is 4

11. Do you use the club's software library?
    Yes 28 No 32
    How often?
    Every mo.-6 Every 3 mo.-5
    Occasionally 11 Seldom 1 12.
    Do you buy the disk of the month?
    All the time 25 Occasionally 27
    Never 6

13. Would you be willing to help with the library?
    Yes 13 No 16

14. Do you use the book library?
    Yes 11 No 27

15. Do you use the BBS?
    Yes 18 No 41
    How often?
    Daily 2 Weekly 10 Monthly 5

16. Are you willing to pay a fee for the BBS?
    Yes 28 No 7
    How much?

One time:	$3 1	$5 3	$10 1
Yearly:	$5 20	$10 7	$15 1

17. Would you submit articles to the newsletter?
    Yes 27 No 21
    When asked why not, most of the no's replied that they didn't have enough knowledge or experience to write an article.

18. Would you like to see more educational software disks of the *month?*
    Yes 28 No 1

19. How would you rate the educational software that you use?

Good 10 Fair 16 Poor 2

It was also asked what percentage of your software is educational. The percentages ranged from 1 percent to 90 percent. The vast majority of responses were in the 10 to 20 percent range.

20. If we do not have an Educational Coordinator, would you:

Not care 17 Feel we need one 30
Like to help 5

21. Which special interest groups are you interested in?

ATARI Graphics	31
Music	13
Beginners	18
Compute!	30
Telecommunications	26
Hardware	25
Education	20
CP/M (ATR8000)	15

Other suggestions:

Home use	1
ACTION	2
Assembly Language	5
Languages	1
Business	2
Games	1
FORTH	1

22. Would you consider being an officer of TAIG?

Yes 12 No 41

23. In addition to the education-related questions above, there were questions about which schools had computers. Following is a list of the various school systems indicated:

Armstrong	Sky Oaks
St. Barts (Wayzata)	St. Louis Park
Galtier	Brimhall Elementary
North View	Wayzata
St. Michaels	Oak Grove
Edina	Hopkins
Becker	Chapel Hill
Edgewood	Edina Countryside
Plymouth	Crooked Lake
L.O. Jacob	Cedar Island
Seward	Eden Prairie
Minnetonka	Holy Name
St. Josephs	Bloomington
Rosemount	Tanglen
Westwood	Fergus Falls

The following computers and their numbers were reported in the above schools:

Apple 335 ATARI 11 Commodore 96
Franklin 60

In addition to all of the above short answer questions, there were several questions that solicited suggestions, opinions, and longer comments. These questions appear below with their respective paraphrased answers. Most of these reponses appeared on more than one questionnaire.

24. What can be done to improve the meeting?

Keep the meeting running more smoothly - possibly with more committees.
Have a 2-3 person panel on how to use the ATARI in various applications.
Hold more tutorials and short technical presentations.
Have more question/answer seesions and more hints.
Have "less introductory crap".
Better placement of TV's.
Foster more involvement of TAIG members.
Discuss more hardware-related issues.

25. What should TAIG do more of?

Programming groups	Projects
Group activities	Questionnaires
Review more software	Training
Languages	Discussion groups

Communication with other groups
Software rating forms to be compiled in newsletter
Make beginners feel more at home

26. What should TAIG do less of?

Changes in meeting place
Games
High tech talk
BBS discussion
TAIG administering to itself at the general meeting

27. How could vendors be of better service?

Be more explicit about what does what.

Be more knowlegeable.
Feature specials at meetings.
Show more demos.
Show less games.
Keep kids from hogging the demos.
Be in a separate room so as not to disrupt the meeting.
Contribute $5 a meeting.
Foster more group buying.
Have more catalogs on hand.

28. What could be done to improve the library services?
Make available desciptions of all the programs.
Place one good utility on each disk of the month.
Demo the library programs at the meeting.
Make old programs available on the BBS.
Provide more organization.
Explain better and more often how to get programs from library.
Remove the junk programs.

29. What do you like or dislike about the newletter?
Not large enough Need beginner's page.
Informative.
Should list BBS numbers.
Arrives too late.
Publish Q/A from meeting.
Too much rambling.
Too technical.
Good variety.
Like Todd's H/W-S/W reviews.
Like H/W construction.
Phil's column good.
Like local ads.
Like reprints from other newsletters
Dislike music articles.
Folksy stuff doesn't cut it.
Like to see articles on advanced assembly language.
.se full names instead of initials.
Have a page listing key people and TAIG services.

30. What educational activities would you like to see TAIG do?
Function as a clearing house for member-written educational software.
Hold a contest to write educational software.
Create a group to review and generate new programs.
Demo more educational programs.
Teach assembly language programming.
Maintain a pool of public domain educational software.
Be available for school computer fairs.
Produce a beginning programming course on disk.
Teach basic programming skills.
Distribute a joystick menu.
Produce a "Big Brother" tutorial.

Now for some editorializing on the questionnaire results. We live in an emerging information-based society; there are precious few free information services and they are in great demand. The questionnaire shows that members view TAIG as one of these; members seem to have a tremendous need for information on all aspects of ATARI computer applications. This is evidenced by the large number of requests for more tutorials, Q/A sessions, discussion groups, expert panels, demos, etc.

A large percentage of TAIG members can be considered beginners or novices to computing. Thus they come to TAIG for the necessary information on how to program in various languages, for hints, and free software. They are in a learning mode and will assimilate whatever TAIG has to offer. In addition, there appears to be a widespread interest in educational activities and software, indicating that many novices have been introduced to computing via their children or the school system in which they are involved. There were many constructive suggestions for TAIG in this area.

Most of these novice members appear very enthusiastic about TAIG and are more than willing to contribute; however, they feel they are not knowledgeable or experienced enough at this time to write newsletter articles or in general to become more actively involved. Therefore, I think one could characterize TAIG as an organization with many more recivers than givers of information. There is an inherent problem here: givers burn out; there is not much motivation or incentive for givers to continue to give in a "hobbyist"

organization such as TAIG. We should highly commend those who have freely given of their time and talent to produce our newsletter, laboriously copy library disks month after month, maintain our membership data base, pay our bills, and in general keep TAIG alive.

But I believe this problem of unbalance can be overcome. The more the givers give, the more experienced the receivers will become. Eventually, the enthusiastic receivers will become the givers. In my two and a half year of involvement with TAIG, I have seen this happening. I believe that TAIG is a rather dynamic organization, and I think we can keep it that way. The results of the questionnaire provide the basis for this optimism.

8K BANK SELECT FOR THE 800
By MIKE DOLEMAN

If you have the plain 800 with 48K RAM and are interested in a little trick to squeeze out some more RAM from the trusty old machine, then consider this. Using the BASIC cartridge takes away 8K RAM and replaces it with the 8K ROM BASIC code, but that RAM it displaced is still there and with a couple transistors and a little wiring you can get at it. (I won't mention that messing with your computer will void the warantee since who still has an 800 with a valid warantee?)

Back in September of '83 there was an article on how to add a toggle switch to switch BASIC in and out, a very handy thing to have if you were tired of opening the cover and pulling or pushing BASIC when it wasn't or was needed. If you did that you are already half done with this 8K bank select procedure. If you havn't then get your SEPT TAIG newsletter.

Now you will need 2 NPN transistors, part number AOT (Any Old Thing) or a Darlington NPN transistor, and hook them to the toggle switch and any of the joystick STICK pins. Also necessary will be another toggle switch to act as an over-ride for the transistor switch and original toggle switch. You can also add a LED if you want to get fancy.

After the hardware modifications there will be some software to write to be able to use the RAM. This will be a machine language utility that swaps the normal memory with your new 8K bank. Since BASIC will be temporarily disabled while the swap takes place, it cannot be used.

The advantage of such an 8K select, or disadvantage depending on your viewpiont, is you can have software that will only work on the modified 800's. If you are writing proprietary software you can feel secure that if anyone gets hold of an unauthorised (pirated) copy, they will be totally bewildered as to why it dosn't work properly on their computer.

If any one wants to do this modification but dosn't want to try it without help, give me a call and we can arrange a help session proir to a TAIG meeting. 861-1893

FORTH NOTES - #4
by Bob Floyd

In this article, I'll first cover memory operations @ , C@ , ! , C! , ? , and C? . Then I'll discuss constants, variables and arrays and gloss over strings a little. I'll also recommend my preferences on which valFORTH packages to purchase.

First of all, I should point out that FORTH typically uses integer values from 0 to 65535 for unsigned numbers or -32768 to +32767 for signed numbers. Signed versus unsigned numbers only matters at printout time where the user may prefer seeing -5 (a value) instead of 65531, or 54279 (an address) instead of -1157. Don't worry about signed or unsigned numbers. They are "transparent" to the computer since they are represented exactly the same way in memory (i.e., the same bits are set). The user rarely has to concern himself with this, and then, only at output time. Input is accepted in either form.

So, it is apparent that FORTH uses 2-byte values (i.e., 0 to 65535 = 2 bytes). Therefore, you must be careful to keep all values within this range. For those rare occasions, valFORTH has provisions for "double numbers" (4 bytes) and floating point numbers. I've never had to use either of these. Also, each value on the stack is always a 2-byte value, whether it needs to be or not. So, when a number is <= 255, its most significant byte (MSB) is 0 & least significant byte (LSB) contains the value. This is all transparent to the user, so there isn't much confusion between 1 and 2-byte numbers.

Now with that out of the way, let's get on with fetch, store and memory print. Fetch, represented by @ , is much like a Basic PEEK statement. First you put an address at Top of Stack (TOS), followed by @ . The address is then replaced at TOS by the 2-byte value stored at the pair of locations beginning at that address. Here's an example. Say you want to put the lowest address of screen memory at TOS. This value is stored at locations 88 & 89. So,

```
        you type      TOS
         88 @        48192
```

or, similarly for the Display List address

```
        560 @        48160
```

Note that the values at locations 88 & 89 are automatically combined to become 48192. If only one byte is desired, use fetch-byte.

```
          88 C@          64
or,       89 C@         188
```

Notice how these values combine by 64 + (188 * 256) to yield 48192. Similarly, a value can be stored to an address with ! or C! . Both of these words expect 2 values at TOS. The top item is the address to store to, while the second item is the value to be stored. Examples are:

```
       you type        TOS
       64 88 C!        empty
or, 48192 88 !         empty
```

or, 48160 560 ! empty

These put the same values back into the memory locations shown in the fetch examples above. Note that 1 and 2-byte values can be used with no problem except that you cannot store a value greater than 255 using C! . The MSB will be lost if you do.

Two other useful memory words are ? and C? printer) the 1-byte (C?) or 2-byte (?) value beginning at the address placed at TOS. So, 88 ? prints 48192 to the screen, or, 89 C? prints 188.

Now why, you may ask, is any of this useful? The main reason is for use of constants, variables, arrays and strings. Here are some examples. Note that all of these must be defined before they can be used.

Defining:

```
  194 CONSTANT BOT1
  188 VARIABLE BOT2
   25 ARRAY TBL1        (25 elements)
   32 CARRAY TBL2       (32 elements)
   40 $VARIABLE NAME    (40 chars)
```

Using:

```
   you type          TOS
     BOT1            194
     BOT2       (address of BOT2)
     BOT2 @          188
   3 TBL1       (addr of element 3)
   5 TBL1 @     (value of element 5)

 200 BOT2 !     (empty - stores 200)
 85 17 TBL2 C!  (empty - store byte
                value 85 to element 17)
```

Here's an example of PADL from previous articles using the already defined variable BOT2. This allows the bottom of screen paddle value to be varied elsewhere in the program.

```
: PADL     ( pdl#  --  vpos )
PADDLE DUP 36 <      PADDLE 36 MIN
 IF DROP 36          BOT2 @ MAX
 ELSE DUP BOT2 @ >
  IF DROP BOT2 @
  ENDIF
 ENDIF ;
```

I won't go into strings at this time. Suffice it to say that string variables (i.e., $VARIABLE) are represented by the address at which they are stored. The first byte of a string contains the string length - so length, without special planning, is limited to 255 characters. Constants are not meant to be changed (although this is possible), so @ is not needed to return a value. The use of variables and arrays should be apparent from the examples. CONSTANT's, VARIABLE'S and ARRAY's all hold 2-byte values, wheareas CARRAY's hold 1-byte values.

Now for something completely different. I've been meaning to recommend a minimum package for programming in FORTH. I recommend starting with 2 packages - valFORTH and General Utilities/Video Editor. These should handle most applications. The screen editor in the second package is the one I like best. If you're into games, I highly recommend the Player Missile package. It simplifies the use of PM graphics greatly. Incidentally, if you buy 3 packages at once, you get a free vinyl valFORTH binder. As for the other packages, personally I like the Display Formatter (custom screen builder), but dislike valDOS (nice capabilities, but uses a lot of memory, leaving little memory available for medium to large programs) and valGRAPHICS (I'm not into Turtle Graphics, but there are some interesting "fill" routines). I'm not familiar with the Text Compression package, although I do know that it stores text efficiently on disk or in RAM.

Locally, User Friendly stocks these packages and Computer Food can get them in a few days. Both offer a discount from the list price. Also, I've had good luck mail ordering these from ComStar before I discovered SPACE and our local dealers.

Next time I'll cover the General Utilities/Video Editor package in some detail. Later, I'll cover terminal input/output, disk access, DO LOOPS, CASE/SELECT structures, and Player/Missile Graphics. After that I'm done, unless I get some requests for certain subjects (yes, that is a threat). Bye for now.

TAIG HALL OF FAME
By MDN

Hi again, sorry I missed the June 3rd meeting. If you have a score which you want entered, you can do 1 of 2 different things:

1) Drop a piece of paper containing your name, game, score, and beginning level in the box at the meeting. The box .ill usually be located in front where the officers sit.
2) Call me at 452-5932 and ask for Mark. Be prepared to give the information in #1.

Remember that you do not need a picture or ny proof of your score but please try to be honest. And also remember that any game can be entered no matter what. Thanks, MDN

TAIG HALL OF FAME

GAME	SCORE	PLAYERS NAME
Encounter	370,420	Phil Seifert
Boulder Dash	21,838	Phil Seifert
Jawbreaker	85,000	Phil Seifert
Robotron	224,300	Steve Vasel
Star Trek	305,000	Steve Vasel
Zeppelin	42,720	Adam Vasel
Apple Panic	153,930	Don Nelson
DigDug	114,800	MDN
Donkey Kong	122,000	MDN
Pole Position	86,650	MDN
Defender	3,600,000	Jeff Robinson
Rosing Bergade?	301,700	John Gnery??
Rainbow Walker	41,128	Dave Stengel
Joust	1,000,000	Josh Swanson
K-razy Kritters	368,200	Tom Buchmann
Pathfinder	26,271,422	Mike Buchmann

NOTE: The last two scores above are recognized as high scores by St. Game Magazine.

BBS 544-9048

LETTERS TO THE EDITOR

We have received a letter to the editor so it will be printed in this column. If you have a question, comment or opinion you wish to state please address them to:

Ralph Jenson
MN14-4B80
12001 W. Hwy 55
Plymouth, MN 55441

Dear Ralph,

I have a fascination with 'Menu and Directory' facilities, so I took an immediate interest in a program called MENUUTL.V15' which first appeared on a TAIG disk-of-the-month, oh, I'd guess four or five months ago.
It has a glowing flaw which I'm surprised no one has caught. This program has appeared on each TAIG D.O.M. for the last five to six months.
Change line 590 to read:

```
590  IF Q=0 AND COUNT>10 THEN 480
```

Now we can store more than 9 files on a disk. Thanks to Wayne Vassel who, at the last TAIG meeting, encouraged me, a rookie, to fix it. What confidence it's given me. I thought there may be others who would like this information. Am I the only person who buys the Disk-of-the-month these days? Anyway thanks for your time.

Sincerely,

Dick Green

TWIN CITIES ATARI INTEREST GROUP
6824 QUEEN AVENUE SOUTH
RICHFIELD, MN 55423

Next TAIG Meeting:
Sunday August 26, 1984
Interest Groups - 6:00 p.m.
TAIG - 7:00 p.m.

St. Louis Park Rec. Center
5005 West 36th Street
St. Louis Park, MN